Docket No.: H0610.0023/P023
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Patent Application of:
Per Zeuthen, et al.

Confirmation No.: 1229

Application No.: 09/768,733

Group Art Unit: 1764

Filed: January 24, 2001

Examiner: W.D. Griffin

For: PROCESS FOR REDUCING CONTENT OF SULPHUR COMPOUNDS AND POLY-AROMATIC HYDROCARBONS IN A HYDROCARBON FEED

APPELLANTS' REPLY BRIEF UNDER 37 CFR § 1.193

Commissioner for Patents
Washington, DC 20231

Dear Sir:

This is a Reply Brief submitted pursuant to 35 U.S.C. § 134 and 37 C.F.R. § 1.193 in response to the Examiner's Answer (Paper No. 011204) mailed January 23, 2004 in connection with the appeal from the final rejection of claims 1-8 mailed April 18, 2003 (Paper No. 8) issued in the above-identified U.S. patent application.

The Examiner's Answer and the final rejection of claims 1-8 are based on the assertion that the hydrotreated effluent of Kelley et al. (U.S. Patent No. 4,040,944) ("Kelley") "may" be cooled before being "hydrotreated over a hydrotreating catalyst at conditions being effective for the partial hydrogenation of polyaromatic." (Examiner's Answer at 3 and 4). The issue, of course, is not whether the process of Kelley "may" be operated or modified in the claimed manner, but rather whether there is any suggestion or motivation to do so. Appellants submit not. As explained below, the statement in Kelley

that the hydrocracker may be "operated at substantially reduced temperatures" does not meet the active step of "cooling the hydrotreated effluent" of the claimed invention.

In addressing Appellants' argument that Kelley fails to teach or suggest the active steps of "cooling the hydrotreated effluent" and "contacting the cooled hydrotreated effluent with a hydrotreating catalyst," the Examiner simply reiterates the language of the October 28, 2003 Advisory Action, pointing to column 6, lines 25-36 of Kelley. The Examiner asserts that "[w]hile it is clear that Kelley discloses that the process can be operated without intervening cooling, condensation, or separation of ammonia and hydrogen sulfide . . . Kelley also discloses that an intervening treatment of the hydrofiner effluent can be performed to remove ammonia and hydrogen sulfide. See column 6, lines 25-36." (Examiner's Answer at 7). The Examiner then concludes that "[o]ne of ordinary skill in the art reading these two sections would realize that an intervening cooling step can be applied" and that "the disclosure that the hydrocraker can be operated at substantially reduced temperatures indicates that cooling can be performed." (Examiner's Answer at 7).

The Examiner's statement that Kelley "disclose[s] that the process can be operated without intervening cooling, condensation, or separation of ammonia and hydrogen sulfide" is taken out of context and misses the point. Kelley specifically emphasizes that "it is normally *desirable* to operate hydrofiner 10 and hydrocracker 12 integrally as shown, i.e., without intervening condensation, depressuring or purification of the hydrofiner effluent" (emphasis added). (Col. 6, lines 26-30). As part of the "[m]any variations . . . contemplated," Kelley notes that "the hydrofining and hydrocracking operations may be carried out non-integrally with intervening treatment of the hydrofiner effluent to remove ammonia, hydrogen sulfide and the like," in which case "hydrocracker 12 can be operated at substantially reduced temperatures and/or higher space velocities." (Col. 6, lines 25-36). However, Kelley's statement that "hydrocracker 12 can be operated at substantially reduced temperatures" simply means that hydrocracker 12 of Kelley could be operated at a "substantially reduced temperature(s)" from 650-875 °F (col. 4, line 39) such as 400 °F, for example. Operating hydrocracker 12 at a "substantially reduced

temperature(s)" of 400 °F does not necessitate or suggest in any manner the active step of "cooling the hydrotreated effluent," much less "contacting the cooled hydrotreated effluent with a hydrotreating catalyst at conditions being effective for conversion of polyaromatic hydrocarbons to monoaromatic compounds." Kelley simply fails to teach or suggest these steps of the claimed invention.

Appellants respectfully submit that Kelley fails to anticipate the subject matter of the claimed invention and that the references of record further do not establish a *prima facie* obviousness. Reversal of the final rejection of claims 1-8 is accordingly respectfully requested.

Dated: March 19, 2004

Respectfully submitted,

By _____
Stephen A. Soffen
Registration No.: 31,063
Gabriela I. Coman
Registration No.: 50,515
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP
2101 L Street NW
Washington, DC 20037-1526
(202) 785-9700
Attorneys for Appellants